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10/600,977	06/20/2003	Ranjan K. Sen	221208	7153

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MARSHALL, GERSTEIN & BORUN LLP (MICROSOFT)
233 SOUTH WACKER DRIVE
6300 SEARS TOWER
CHICAGO, IL 60606

EXAMINER

SEYE, ABDOU K

ART UNIT	PAPER NUMBER
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2194

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/600,977	Applicant(s) SEN, RANJAN K.	
	Examiner Abdou Karim Seye	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

1. The amendment filed on January 10, 2007 has been received and entered. Claims 27 and 30-34 have been amended. The currently pending claims considered below are Claims 1-34.

Specification Objection.

Claims 27 and 30-34 are objected because the new term "tangible" claimed subject matter is not defined in the specification. The meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import, it should be identified in the descriptive portion of the specification. A term used in the claims may be given a special meaning in the description. Therefore the specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Dependant claims 28 and 29 are affected by the objection of claim 27.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. The amendment filed on January 10, 2007, has not overcome the rejections of Claims 27-34 under 35 U.S.C. 101 in paragraph 2 of the previous office action by amending these claims. The final result of these claims does not produce a tangible result.

To overcome this rejection, applicant needs to amend the claims to include the element "computer-readable storage medium" in order to direct the claimed invention to a statutory subject matter. Furthermore, by currently amending the claim, new term has been introduced that does not appear in the originally filed specification. See MPEP 608.01(o).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-34 are rejected under 35 U.S.C. 102 (e) as being anticipated by Shiomi et al. (20060095919).

Claim 1: Shiomi discloses a method for tracking kernel resource usage comprising the steps of:

a. Generating a tag to charge a process allocated with kernel resources (fig. 15/33a paragraph 161, 162, 163; fig. 15/34a, paragraph 154, 157; fig. 1/13c, paragraph 86 and 88);

b. Determining whether the process is a kernel process or a user process (fig. 15/33a, 33b, paragraph 161, 162, 163; fig. 1, paragraph 88, 89 and 95; the library unit making judgement regarding a call back function (kernel process) and the caller application (user process) ; and

c. Flagging the tag to indicate whether the process is a kernel process or a user process based upon the determination step (fig. 16,

paragraph 134, fig. 19, paragraph 163; paragraph 95; the library unit using flags).

Claim 2: Shiomi discloses a method for tracking kernel resource usage as in claim 1 above and further discloses that step of generating a tag further comprises the steps of:

- a. Determining whether a request for kernel resources is passed from an intermediate function using a worker thread(fig. 15, paragraph 133);
- b. Finding at least one link between the worker thread and the process (fig. 16, paragraph 134); and
- c. Identifying the process that originated the request according to the found link between the worker thread and the process (fig.16, paragraph 134).

Claim 3: Shiomi discloses a method for tracking kernel resource usage as in claim 1 above and further discloses that the step of flagging comprises the steps of:

- a. Generating a tag value to identify the kernel resources allocated to a kernel process (fig. 27, paragraph 186); and
- b. Saving a driver identification to the tag value (fig. 27, paragraph 186).

Claim 4: Shiomi discloses a method for tracking kernel resource usage as in claim 3 above and further discloses that the tag value with the driver identification is saved in a first word of the tag (fig. 27, paragraph 187).

Claim 5: Shiomi discloses a method for tracking kernel resource usage as in claim 1 above and further discloses that step of flagging the tag further comprises the steps of:

- a. Generating a tag value to identify kernel resources allocated to a user process (fig. 27, paragraph 186, 187);
- b. Saving a type of kernel resources allocated to the tag (fig. 27, paragraph 186); and
- c. Saving a user process identifier to the tag to identify the process (fig. 27, paragraph 186).

Claim 6: Shiomi discloses a method for tracking kernel resource usage as in claim 5 above and further discloses that the tag value and the type of kernel resources are saved in a first word of the tag, and the user process identifier is saved in a second word of the tag (fig. 12, paragraph 117).

Claim 7: Shiomi discloses a method for tracking kernel resource usage as in claim 1 above and further discloses that the step of flagging the tag further comprises the steps of:

- a. Generating a tag value to identify kernel resources allocated to a user process (fig. 12, paragraph 117);
- b. Saving the tag value to a first word of the tag (fig. 12, paragraph 117); and
- c. Saving a user process identifier to identify the process to second word of the tag (fig. 12, paragraph 117).

Claim 8: Shiomi discloses a method for tracking kernel resource usage comprising the steps of:

- a. Generating a tag to charge a process allocated with kernel resources (fig. 15/33a paragraph 161,162,163; fig. 15/34a, paragraph 154,157);
- b. Determining whether the process is a first predefined process or a second predefined process (fig. 15/33a, 33b, paragraph 161, 162, 163); and
- c. Saving an identifier to the tag to identify whether the process is a first predefined process or a second predefined process based upon the determination step (fig. 16, paragraph 134; fig. 19, paragraph 163).

Claim 9: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the method comprises the steps of:

- a. Saving a process identifier to identify the process allocated with the kernel resources (fig. 27, paragraph 186); and
- b. Saving a type of kernel resources allocated to the process (fig. 27, paragraph 186).

Claim 10: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the step of generating a tag further comprises the steps of:

- a. Determining whether a request for kernel resources is passed from an intermediate function using a worker thread (fig. 15, paragraph 133);
- b. Finding at least one link between the worker thread and the process (fig. 16, paragraph 134); and

c. Identifying the process that originated the request according to the found link between the worker thread and the process(fig.16, paragraph 134).

Claim 11: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the step of saving an identifier further comprises the step of flagging the tag as the first predefined process or the second predefined process according to the determination step (fig. 16, paragraph 134, fig. 19, paragraph 163).

Claim 12: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the first and second predefined processes relate to processes from kernel level or user level in an operating system (fig.15/44, paragraph 125)

Claim13: Shiomi discloses a method for tracking kernel resource usage as in claim 8 above and further discloses that the first and second predefined processes relate to processes used by users, a group of users, or accounts of the users in a network system; applications (fig. 15, paragraph 83).

Claim 14: Shiomi discloses a method for tracking kernel resource usage comprising the steps of:

a. Generating a tag to charge a process called from user level of an operation system allocated with kernel resources (fig. 15/33a, paragraph 161,162, 163);

b. Saving a tag value to the tag to identify the kernel resources

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allocated to the user process (fig. 16, paragraph 134; fig. 19, paragraph 163);
and

c. Saving a user process identifier to the tag to identify the user process (fig. 27, paragraph 186).

Claim 15: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses that the tag value is saved in a first word of the tag, and the user process identifier is saved in a second word of the tag (fig.12, paragraph 117).

Claim 16: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses the step of flagging the tag as a process called from the user level of an operating system (fig. 16, paragraph 134; fig.19, paragraph 163).

Claim 17: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses that the step of saving a tag value comprises the steps of:

a. Determining whether a request for kernel resources is passed from an intermediate function using a worker thread (fig.15, paragraph 133);

b. Finding at least one link between the worker thread and the process (fig.16, paragraph 134); and

c. Identifying the process that originated the request according to the found link between the worker thread and the process (fig.16, paragraph 134).

Claim 18: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses the step of saving a type of kernel resources allocated to the user process to the tag (fig.12 paragraph 117).

Claim 19: Shiomi discloses a method for tracking kernel resource usage as in claim 14 above and further discloses that the step of saving a user process identifier comprises the steps of:

- a. Extending the tag with a second word (fig.12, paragraph 117);
- and
- b. Saving the user process identifier to the second word of the tag (fig. 12 paragraph 117).

Claim 20: Shiomi discloses a method for tracking kernel resource usage as in claim 19 above and further discloses the step of saving the tag value to a first word of the tag (fig. 5, paragraph 96).

Claim 21: Shiomi discloses a method for tracking kernel resources allocated to kernel and user processes indicated by a plurality of tags, the method comprising the steps of:

- a. Identifying an amount of kernel resources allocated to a process indicated by a selected tag (fig. 29, paragraph 200);
- b. Saving an association of the identified amount of kernel resources allocated with the process to a file (fig. 29, paragraph 200);
- c. Identifying a type of the kernel resources allocated to the process indicated by the selected tag (fig. 29, paragraph 200); and

d. Saving an association of the identified type of the kernel resources allocated with the process to the file(fig. 29, paragraph 200).

Claim 22: Shiomi discloses a method for tracking kernel resources allocated to kernel and user processes indicated by a plurality of tags as in claim 21 above and further discloses that the steps of:

a. Selecting a tag from the plurality of tags (fig. 18, paragraph 143); and

b. Saving the selected tag to the file (fig. 18, paragraph 143).

Claim 23: Shiomi discloses a method for tracking kernel resources allocated to kernel and user processes indicated by a plurality of tags as in claim 21 above and further discloses the steps of:

a. Determining whether there are any more tags from the plurality of tags (fig. 18, paragraph 143); and

b. Repeating the method for any other tags based upon the determination step (fig. 18, paragraph 143).

Claim 24: Shiomi discloses a method for tracking kernel resources allocated to kernel and user processes indicated by a plurality of tags as in claim 21 above and further discloses the step of identifying the type of kernel resources comprises the steps of:

a. Determining whether the process is called from the user level (fig.15/33a, paragraph 161,162, 163); and

b. Performing the step of identifying the type of kernel resources

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when the process is called from the user level (fig. 15/33a, paragraph 161,162, 163).

Claim 25: Shiomi discloses a method for managing kernel resource usage comprising the steps of:

a. Reading a usage policy, wherein the usage policy includes data relating to threshold limits according to processes and kernel resource type (fig. 29/105, paragraph 208);

b. Searching a file to determine an amount of kernel resources used by each process (fig. 30, paragraph 209);

c. Determining whether the amount of kernel resource usage exceeds the threshold limits according to the user policy (fig. 30, paragraph 209); and

d. Taking an action according to the usage policy when the amount of kernel resource usage is over the threshold limits (fig. 30, paragraph 210, 211).

Claim 26: Shiomi discloses a method for managing kernel resource usage as in claim 25 above and further discloses the steps of:

a. Determining whether the process should be aborted according to the usage policy (fig. 30, paragraph 211);

b. Aborting the process according to the determination step (fig. 30 paragraph 211); and

c. Updating the file to reflect the aborted process (fig. 30,

paragraph 211).

Claim 27: Shiomi discloses a tangible computer-readable medium having stored thereon a data structure, comprising:

- a. A first field containing a user process identifier to identify a user process allocated with kernel resources (fig. 27, paragraph 187) ; and
- b. A second field containing a value to identify kernel resources allocated to the user process (fig. 27, paragraph 187).

Claim 28: Shiomi discloses a tangible computer-readable medium having stored thereon a data structure as in claim 27 above and further discloses a third field containing a flag that indicates the user process as a process called from user level (fig. 25, paragraph 174).

Claim 29: Shiomi discloses a tangible computer-readable medium having stored thereon a data structure as in claim 27 above and further discloses that the first field is a first long word of a tag, and the second field is a second long word of the tag (fig. 12, paragraph 117).

Claim 30: Shiomi discloses a tangible computer-readable medium having computer-executable instructions for performing steps comprising:

- a. Generating a tag to charge a process allocated with kernel resources (fig. 15/34a, paragraph 154,157);
- b. Determining whether the process is a kernel process or a user process (fig. 15/33a,33b, paragraph 161, 162, 163); and
- c. Flagging the tag to indicate whether the process is a kernel

process or a user process based upon the determination step (fig. 16, paragraph 134; fig.19, paragraph 163).

Claim 31: Shiomi discloses a tangible computer-readable medium having computer-executable instructions for performing steps comprising:

- a. Generating a tag to charge a process allocated with kernel resources (fig.15/33a, paragraph 161, 162, 163; fig. 15/34a, paragraph 154, 157);
- b. Determining whether the process is a first predefined process or a second predefined process (fig.15/33a,33b, paragraph 161, 162, 163); and
- c. Saving an identifier to the tag to identify whether the process is a first predefined process or a second predefined process based upon the determination step (fig.16, paragraph 134; fig.19, paragraph 163).

Claim 32: Shiomi discloses a tangible computer-readable medium having computer-executable instructions for performing steps comprising:

- a. Generating a tag to charge a process called from user level of an operating system allocated with kernel resources (fig. 15/33a, paragraph 161, 162, 163);
- b. Saving a tag value to the tag to identify the kernel resources allocated to the user process (fig. 15/33c, paragraph 161, 162, 163); and
- c. Saving a user process identifier to the tag to identify the user process (fig. 16, paragraph 134).

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Claim 33: Shiomi discloses a tangible computer-readable medium having computer-executable instructions for performing steps comprising:

a. Identifying an amount of kernel resources allocated to a process indicated by a selected tag (fig. 32, paragraph 215);

b. Saving an association of the identified amount of kernel resources allocated with the process to a file (fig. 32, paragraph 215) ;

c. Identifying a type of the kernel resources allocated to the process (fig 32/105, paragraph 208); and

d. Saving an association of the identified type of the kernel resources allocated with the process to the file (fig. 32, paragraph 208).

Claim 34: Shiomi discloses a tangible computer-readable medium having computer-executable instructions for performing steps comprising:

a. Reading a usage policy, wherein the usage policy includes data relating to threshold limits according to processes and kernel resource type (fig. 29/105, paragraph 208);

b. Searching a file to determine an amount of kernel resources used by each process (fig. 30, paragraph 209).

c. Determining whether the amount of kernel resource usage exceeds the threshold limits according to the user policy (fig. 30 paragraph 209);
and

d. Taking an action according to the usage policy when the

amount of kernel resource usage is over the threshold limits (fig. 30, paragraph 210, 211).

Response to Arguments

8. Applicant's arguments filed on January 05, 2007 have been fully considered but they are not persuasive.

a. Claim 1: applicant argues in (page 11, lines 1-2) that, Shiomi does not teach "making a determination of whether a process is a kernel process or a user process". Shiomi teaches a callback function (paragraph 88, 89 and 94) from each library unit that is registered in response to request from an application call for access to resources; and a library unit making judgement on the call back function (paragraph 136; kernel process) and a call request from an application (paragraph 137; user process). Therefore the claimed elements " judgement and decision making process of the library unit" with respect to the application and call back function call of shiomi's reference meets the claimed limitation of the claim.

b. Claim 8: applicant argues in (page 11, lines 12-13) that Shiomi does not teach "determining whether the process is a first defined process or a second defined process". Shiomi teaches in (fig. 15, paragraph 136) an application start process that triggers a task and thread from a "kernel 34a" ; and a library unit in (paragraph 95, 128, 133 and 134, 136) making a judgement/decision about kernel threads (second defined process) and a call request from an starting or first defined application process.

c. claim 21 : applicant argues in (page 11, lines 28-29) that Shiomi does not teach "identifying a type of kernel resource allocated to the process, and separate the type of processes" Shiomi teaches different resource names each associated with an application id (fig. 5, paragraph 97) held in a library unit.

d. As per Claims 2-7,9-20 and 22-34, Response to applicant's argument see the rejection and response to arguments above

Conclusion

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Abdou Seye whose telephone


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number is (571) 270-1062. The examiner can normally be reached Monday through Friday from 7:30 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, contact the examiner's supervisor, William Thomson at (571) 272-3718. The fax phone number for formal or official faxes to Technology Center 3600 is (571) 273-8300. Draft or informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 273-6722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-3600

AKS
January 07, 2007



THOMSON
SUPERVISOR/ART UNIT EXAMINER